Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA)

Both Congress and the Administration have recognized harmful algal blooms (HABs) as one of the most scientifically complex and economically damaging coastal issues challenging our ability to safeguard the health of our nations coastal ecosystems. Virtually every coastal state has reported recurring major blooms resulting in impacts which have included the loss of economically and culturally vital shellfish resources, illness and death in populations of cherished protected marine species, and serious threats to human health posed by algal toxins. Just one HAB event can cost tens of millions of dollars to local coastal economies and over the past few decades the total costs associated with HABs have been conservatively estimated at over $1 billion.

In December 2004, Congress enacted and the President signed into law the Harmful Algal Bloom and Hypoxia Amendments Act of 2004 (Public Law 108-456) otherwise known as HABHRCA. This Act, originally passed in 1998 to combat the growing treat of HABs, reaffirms and expands the mandate for NOAA to advance the scientific understanding and ability to detect, monitor, assess, and predict HABs and to develop programs for research into methods of prevention, control, and mitigation of HABs. The Administration further recognizes the importance of HABs as a high priority national issue by specifically calling for the implementation of HABHRCA in the President's U.S. Ocean Action Plan.

HABHRCA calls for the reestablishment of the Federal interagency Task Force on HABs and Hypoxia which will oversee the production of the following assessments, reports, and programs:

- **Develop a Report to Congress on Harmful Algal Bloom Impacts**
- **Develop a National Scientific Research, Development, Demonstration, and Technology Transfer Plan on Reducing Impacts From Harmful Algal Blooms**
- **Conduct a Scientific Assessment of Freshwater Harmful Algal Blooms**
- **Conduce a Scientific Assessment of Harmful Algal Blooms**
- **Conduct a Scientific Assessment of Hypoxia**

HABHRCA authorizes funding to be appropriated to the Secretary of Commerce for research, education, and monitoring activities related to the prevention, reduction, and control of harmful algal blooms and hypoxia. Specifically, funding is authorized for the following ongoing and new programs and activities:

- **To enable the National Oceanic and Atmospheric Administration to carry out research and assessment activities, including procurement of necessary research equipment, at research laboratories of the National Ocean Service and the National Marine Fisheries Service.**
- **To carry out the Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) project under the Coastal Ocean Program established under section 201c of Public Law 102-567.**
- **For the National Ocean Service of the National Oceanic and Atmospheric Administration to carry out a peer-reviewed research project on management measures that can be taken to prevent, reduce, control, and mitigate harmful algal blooms.**
- **To carry out Federal and State annual monitoring and analysis activities for harmful algal blooms administered by the National Ocean Service of the National Oceanic and Atmospheric Administration.**
- **For activities related to research and monitoring on hypoxia by the National Ocean Service and the Office of Oceanic and Atmospheric Research of the National Oceanic and Atmospheric Administration; and to carry out local and regional assessments of harmful algal blooms and hypoxia.**

NOAA and our Federal, state, and academic partners have made considerable progress in the scientific understanding, detection, monitoring, assessment, and prediction of HABs and hypoxia in coastal ecosystems. These advances are helping coastal managers undertake short- and long-term efforts to prevent and mitigate the detrimental effects of these phenomena on human health and on valuable coastal resources. The recent reauthorization of HABHRCA will ensure continued development and delivery, through a suite of research programs, of regionally-specific detection and analysis methods, coupled biological-physical models, enhanced state and local government HAB monitoring capacity in both marine and freshwater environments and new methods for prevention, control and mitigation.

These truly interdisciplinary studies are helping to advance the state of the science and also lead to results with direct application to needs of state coastal resource and public health managers, a perfect example of the coordinated, holistic, ecosystem-based studies required to implement NOAA's strategic plan goal of ecosystem-based management. Tools and technology being developed under HABHRCA are critical for NOAA to meet its ocean and human health responsibilities under the Oceans and Human Health Act. HABHRCA research activities are closely tied to the NOAA plan for successful expansion of operational HAB forecasting systems around the US coast to include the Pacific Northwest, California Coast, Gulf of Mexico, Chesapeake Bay, and Gulf of Maine. HABHRCA research is also developing and delivering the biological components key to making developing regional ocean observing systems relevant to coastal resource and public health managers.

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